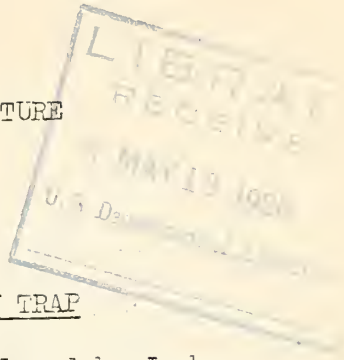


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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY



CONSTRUCTION AND OPERATION OF MINER CROW TRAP

In preparing the drawing of the crow trap developed by Jack Miner, of Kingsville, Ont., the Biological Survey has made a few slight modifications that in no way affect the mechanical features, but which it is believed will simplify its construction and possibly reduce the cost. The dimensions conform closely to the original trap, which had a total length of 73 to 75 feet, a height of 6 feet, a bottom width of 20 feet, and a top width of 12 feet.

Materials.--The materials used in the construction of a trap of this size are 14 heavy posts (about 8 feet long and 6 or 8 inches in diameter); 2 posts about the same size but about 11 feet long; 2 smaller posts about 11 feet long; 412 feet of 1-1/2-inch iron pipe with elbows and T-joints; 12 posts about 2 x 2 inches and 7-1/2 feet long; 340 feet of 2-inch-mesh galvanized poultry wire, 6 feet wide; 150 feet of 2-inch-mesh galvanized poultry wire, 1 foot wide; 10 pieces of quarter-inch flat iron about 1 inch wide and 18 inches long; 10 pieces of quarter-inch flat iron, 1 inch wide and 10 inches long; 10 pieces of 1/2-inch iron rod about 3 inches long; 12 flat or strap hinges about 2 inches wide; about 300 feet of heavy galvanized iron wire; a quantity of old lumber to complete the framework of the trap; and the necessary tools for pipe fitting, forging, and carpentry.

Construction.--After the site has been selected, the 14 heavy posts are set in the ground in two parallel lines 12 feet apart, so as to inclose a rectangle about 75 feet long and 12 feet wide. The posts can best be set by the use of a regular post-hole digger and should project 6 feet above ground. The opposite posts in the two lines are then joined together by heavy timbers (2" x 6", were used by Mr. Miner), and cross bracing added where necessary. Note.--The ends of these timbers should not extend entirely across the tops of the posts, but should leave a space about 3 inches, which will be necessary in attaching the doors.

Two pieces of 6-foot wire netting will be used to cover the top. The details of the ends are best left until the doors are in place.

Doors.--The doors are merely frames, made from 1-1/2-inch iron pipe, 206 feet being required for each door, which measures 75 feet by 7 feet. Six pieces of pipe are used as cross braces, parallel to the ends. Joints should be made with the usual T, or (at the corners) elbow joints. Having completed the frames, a piece of netting 6 feet wide and one 1 foot wide are used to cover them, the netting being laced together and to the frame as tightly as possible. The doors may now be set up against the posts, to which they are hinged by the simple expedient of heavy spikes driven into the tops of the posts and bent over the upper pipe of the frame.

With the doors in place the ends may be completed on board frames nailed to the end posts. They also should be covered with wire netting, and a door should be provided to admit the operator.

Triggers.--By pulling each door out and up until horizontal, the place for the line of the triggers can be determined. On each of these lines five blocks are placed at equal distances apart. (Short sections of 4 x 4 timbers set in the ground will do). These should be set so as to project an inch or two above the ground. To these the triggers are hinged. The triggers are 2 x 2 inch posts 7½ feet long (2 x 4 timbers, ripped longitudinally will make satisfactory triggers), to the top of which are bolted pieces of quarter-inch flat iron about 18 inches long. These irons must be drilled for screws or bolts before they can be attached and there also should be a quarter-inch hole near one end; the opposite end is forged around a piece of ½-inch iron rod so that the latter will project as pins at a right angle about 2 inches. Great strain will come on this iron work, so the pins must be firm. In attaching the irons to the posts the perforated end should extend several inches beyond the wood and when held vertically the ½-inch iron pins should be approximately at the height of the doors when open; i. e., 6 feet from the ground. The triggers are secured to the ground blocks by strap hinges placed on the side toward the blind of the operator.

At the end of the lines of triggers and about 4 feet beyond, posts are set firmly in the ground. The end posts need not be large but the trigger posts, which carry the operating levers, should be 6 or 8 inches in diameter. Also the end posts need be only a few inches higher than the triggers, but the trigger posts should be 2 or 3 feet higher. At the height of the tops of the triggers a hole is bored through the trigger posts and through each is passed a piece of heavy wire, which connects the triggers by means of the holes in the iron work, where a loop is made, and is finally fastened to the end post. Each wire should be taut from the trigger post to the last trigger but should have a few inches of slack between the last trigger and the end post. This is to prevent the triggers falling too far forward.

On each trigger post a trip lever (of the same material as the triggers) is attached by hinges across the tops. These levers should extend within about a foot of the ground, and to each is attached the ends of the trigger wire that passes through the trigger post. To prevent the levers from being pulled too far, wire safety collars are attached to the trigger posts a few inches above the lower ends of the levers. These should allow the lower ends of the levers to move about 2 feet. The pull wires are attached to the lower ends of the two levers, and after extending about 50 feet they may be joined together and continued to the blind as a single wire.

Trigger hooks.--At points on the door frames corresponding to the position of the triggers, the trigger hooks are attached. These are made from pieces of quarter-inch flat iron about 1 inch wide, which are forged so that one end may be curled tightly around the pipe of the door frame while the other end is formed into a hook that will rest over the pins on the triggers.

Operation.--As will be obvious from their size, the doors are very heavy and will likely require the services of three men to set. The doors are pulled out and up to the horizontal position and the triggers moved so that the hooks on the door frames rest over the trigger pins. It is well to attach the blind end of the pull wire to a short stick (such as a section of broomstick), so that it may be better grasped with both hands. A sharp jerk on this will pull the trip levers from 1 to 2 feet at their lower ends, which will pull the trigger wires in the same direction, 2 or 3 inches. As these wires are attached to all triggers, the action is simultaneous. The upper ends of the triggers move toward the operator, drawing the pins through the trigger hooks, and allowing the doors to fall.

Bait.--Unquestionably carrion is the bait for crows, and the carcasses of horses, mules, or cattle will be found effective attractions. If these can be obtained fresh, they should be cut up into sections in the trap and the pieces distributed throughout its length. It is well to allow the birds to feed unmolested for several days before attempting to pull the trap. A larger catch is thus assured. For the same reason it is not advisable to try to operate the trap every day. Probably once a week would be about the right interval.

Crow investigations.--The Biological Survey is tracing the movements of the crows of different parts of the country, and there is no doubt that it will be an easier matter to control the occasional depredations of these birds when more information is available regarding their movements.

For these reasons it is desired to have a large number of crows banded with official Biological Survey bands, and released uninjured. Persons operating crow traps will aid in these investigations if they will write for a supply of bands and instructions for their use. When a banded crow is caught or killed and the facts reported, the Biological Survey will record the data and advise the person who banded the bird as to the date and locality of capture.

